

Global Leaders in Motion and Control

With over 90 years of experience, NSK products and solutions are used by leading brands around the world. We set the benchmark in industry innovation by investing more than \$120 million annually in R&D. For improved performance and enhanced productivity through high quality motion and control solutions, turn to NSK.



Case Study:

Improved Performance, Productivity and Profitability

The Challenge:

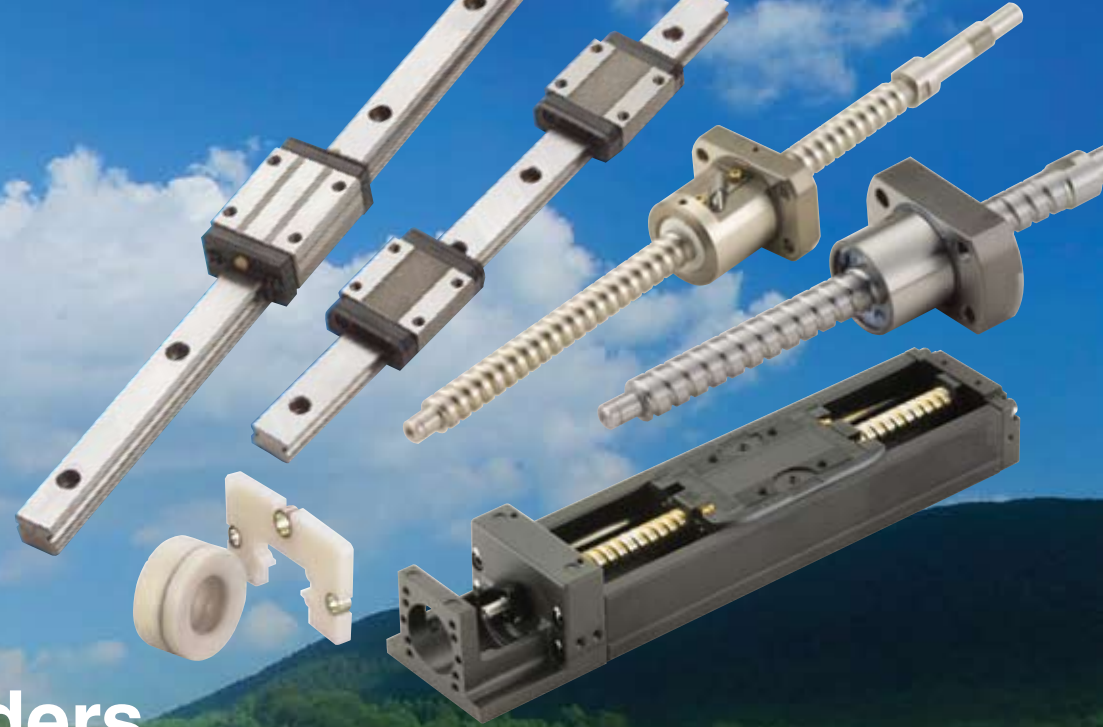
A major tire manufacturer was using a competitor's ball screw in the air drum of their tire building machine. Due to frequent ball screw failures, the manufacturer was experiencing high costs from replacement ball screws and increased maintenance time. In addition, the machines were logging a significant amount of downtime, resulting in additional costs due to the lack of productivity.

The Solution:

In order to provide a solution that would increase service life, NSK conducted a thorough investigation of the failures. A higher quality ball screw was offered to the end-user at a comparable price. The ball screw was tested and approved by the end-user.

The Result:

The upgrade to NSK's product improved uptime, reduced maintenance and offered overall improved efficiency. More importantly, the NSK replacement ball screw increased service life by over 50%. The actual cost savings realized due to improvement made by NSK was \$138,779.



Worldwide Sales Offices

NSK Ltd. - Headquarters, Tokyo, Japan ASIA BUSINESS STRATEGIC DIVISION-HEADQUARTERS INDUSTRIAL MACHINERY BEARINGS DIVISION-HEADQUARTERS AUTOMOTIVE DIVISION-HEADQUARTERS NEEDLE ROLLER BEARINGS STRATEGIC DIVISION-HEADQUARTERS PRECISION MACHINERY & PARTS DIVISION-HEADQUARTERS	tel: 03-3779-7145 tel: 03-3779-7227 tel: 03-3779-7189 tel: 03-3779-2563 tel: 03-3779-7219	www.nsk.com	Korea: NSK Korea Co., Ltd. Seoul Changwon Plant	tel: 03-3287-0300 tel: 055-287-6001	www.kr.nsk.com	Torino Plant Netherlands: NSK European Distribution Centre B.V. Tilburg	tel: 0119824811 tel: 02-4647647
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For more information about NSK products, please contact:



NSK Solutions for the Tire Industry

Linear Guides, Ball Screws and Monocarriers Designed
for Unparalleled Accuracy and Lasting Performance



Improved Productivity and Reduced Maintenance with NSK

The following products are a small sample of the wide selection of superior quality motion and control products NSK offers. For complete details, contact an NSK representative directly or your authorized NSK distributor.



LH/LS Series Linear Guides

Ideal for your automated applications, NSK LH/LS Series linear guides can be butted together for applications requiring extra long travel lengths. The gothic arch groove and contact angle of the ball combine to reduce friction while increasing displacement on the linear guideway.

Other features include:

- High self-aligning capability
- High load carrying capacity and improved rigidity
- High resistance against impact load
- High accuracy
- Easy handling and installation
- Multiple models and sizes for a wide variety of applications
- Interchangeable which allows for random matching of rails and ball slides

Possible Applications

For improved performance, you can upgrade to NSK LH/LS Series linear guides in these applications:

- Extruders
- Bead carcass making
- Calendering
- Tire building machines
- Curing press
- Testing machines



Ball Screws

Whether you need a unique custom design for a demanding application or a standard off-the-shelf ball screw offering shorter lead times and ease of design and installation, NSK has the solution.

NSK ball screws offer:

- Unparalleled accuracy
- Superb durability
- Smooth movement and high efficiency

Possible Applications

Upgrade to NSK ball screws in any of the following applications:

- Bead carcass making
- Calendering
- Tire building



MCH Series Monocarriers

These versatile and lightweight compact linear actuators are available in a variety of sizes, making them useful in a number of automated applications.

MCH Series Monocarriers offer:

- High rail rigidity
- Roller bearings to help reduce friction and extend service life
- Standard corrosion resistant coating for increased durability in harsh environments
- A wide variety of sizes and accuracy grades
- All-in-one design for reduced design and installation time

Possible Applications

Use MCH Series Monocarriers in these applications:

- Bead carcassing
- Tire uniformity machines
- Testing machines



K1™ Lubrication Units Reduce Maintenance Costs

NSK K1™ Lubrication Units are made from porous synthetic resin, which holds a large supply of lubricating oil. Mounted on either end of a linear guide or ball screw, the K1™ Lubrication Unit provides a continuous flow of oil from the resin onto the surface of the rail or shaft. Built-in seals simultaneously contain the oil inside and seal out contaminants.

K1™ Lubrication Units can be used with grease and are ideal for systems and environments which make oil replenishment difficult. They significantly lower machine operation costs and have virtually no environmental impact.

Ball screws and linear guides equipped with NSK K1™ Lubrication Units offer reduced maintenance, saving time and money in your operations.

K1™ Lubrication Units offer:

- Continuous lubrication
- Reduced maintenance time
- Reduced maintenance cost
- Improved efficiency
- Increased uptime

Contact NSK Today

Make the switch to NSK.

Call **1-800-675-9930** or go to www.us.nsk.com

The NSK logo, consisting of the letters 'NSK' in a bold, red, sans-serif font.